

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Currently amended) An X-ray apparatus comprising:

an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted thereon at respective positions allowing an examination subject to be disposed between the x-ray source and the radiation detector;

a supporting arrangement for said carrier support for moving said carrier support relative to the examination subject for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector;

an optical 3D sensor comprising a light source, mounted on said carrier support, that emits a light beam that is detectable on a surface of the subject and an optical detector, mounted on said carrier support, that detects said light beam on the surface of the subject and that emits a detector output dependent thereon, that performs a distance measurement selected from the group consisting of active triangulation, active focus search, propagation measurement, and interferometry, ~~mounted to said carrier support~~; and

said supporting arrangement for said carrier support also moving said carrier support relative to said examination subject to acquire a 3D image dataset, representing height above a 2D plane, with from said distance measurement and said detector output of said optical detector of said

optical 3D sensor, conforming to least a portion of a surface of the examination subject.

2. (Original) An X-ray apparatus as claimed in claim 1, wherein said carrier support is a C-arm.

Claim 3 has been amended as follows:

3. (Currently Amended) An X-ray apparatus as claimed in claim 2, wherein said C-arm has a circumference, and wherein said supporting arrangement moves said C-arm along said circumference during acquisition of said 30 image dataset series of 2D projections.

Claim 4 has been amended as follows:

4. (Currently Amended) An X-ray apparatus as claimed in claim 2, wherein said supporting arrangement moves said C-arm through an angulation movement for acquiring said ~~series of 2D projections~~ 3D image dataset.

5. (Original) An X-ray apparatus as claimed in claim 2 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

6. (Previously Presented) An X-ray apparatus as claimed in claim 1 comprising a computer supplied with said series of 2D projections for calculating a volume dataset of the body of the examination subject, and for combining said 3D image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.

Claim 7 has been amended as follows:

7. (Currently Amended) A method comprising the steps of:

disposing an examination subject in an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted

thereon at respective positions allowing the examination subject to be disposed between the x-ray source and the radiation detector;
moving said carrier support relative to the examination subject for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector; and
performing a distance measurement, selected from the group consisting of active triangulation, active focus search, propagation measurement, and interferometry, with an optical 3D sensor comprising a light source and an optical detector both mounted to said carrier support, while also moving said carrier support relative to said examination subject to acquire a 3D image dataset, representing height above a 2D plane, with from said distance measurement and an output of said optical detector of said optical 3D sensor, conforming to least a portion of a surface of the examination subject.

8. (Original) A method as claimed in claim 7, comprising employing a C-arm as said carrier support.

Claim 9 has been amended as follows:

9. (Currently Amended) A method as claimed in claim 8, wherein said C-arm has a circumference, and comprising moving said C-arm along said circumference during acquisition of said 3D image dataset ~~series of 2D projections~~.

Claim 10 has been amended as follows:

10. (Currently Amended) A method as claimed in claim 8, comprising moving said C-arm through an angulation movement for acquiring said ~~series of 2D projections~~ 3D image dataset.

11. (Original) A method as claimed in claim 8 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

Claim 12 has been amended as follows:

12. (Currently Amended) A method as claimed in claim 7 comprising supplying a computer with said series of 2D projections and, in said computer, calculating a volume dataset of the body of the examination subject, and ~~for~~ combining said 3D image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.